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IMPROVING PRODUCTIVITY THROUGH GOAL SETTING WITH UNION WORKERS.(U)
APR 81 G P LATHAM, L M SAARI N00014-79-C-0680
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AD A 097583

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER GS-7	2. GOVT ACCESSION NO. AD-9077583	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) IMPROVING PRODUCTIVITY THROUGH GOAL SETTING WITH UNION WORKERS.		5. TYPE OF REPORT & PERIOD COVERED Technical Report
7. AUTHOR(s) Gary P. Latham & Lise M. Saari		6. PERFORMING ORG. REPORT NUMBER GS-7
9. PERFORMING ORGANIZATION NAME AND ADDRESS Graduate School of Business Administration University of Washington Seattle, WA 98195		8. CONTRACT OR GRANT NUMBER(s) N00014-79-C-0680
11. CONTROLLING OFFICE NAME AND ADDRESS Organizational Effectiveness Research Office of Naval Research (Code 452) Programs Arlington, VA 22217		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS NR170-890
14. MONITORING AGENCY NAME (if different from Controlling Office) LEVEL		12. REPORT DATE April 1981
		13. NUMBER OF PAGES 10
		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) goal setting motivation time series design union truck drivers logging productivity strike production standards		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Interviews were conducted with union business agents on conditions necessary for their toleration of a goal setting program. Subsequent to the interviews, goals were assigned to 39 truck drivers. The results were analyzed using a time series design that included a comparison group (N=35). The results showed a significant increase in productivity for the drivers who received specific goals. When the conditions necessary for the union's toleration of the goal setting program were no longer met, there was a wildcat strike.		

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IMPROVING PRODUCTIVITY THROUGH GOAL SETTING
WITH UNION WORKERS

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TECHNICAL REPORT GS-7

April 1981

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ABSTRACT

Interviews were conducted with union business agents on conditions necessary for their toleration of a goal setting program. Subsequent to the interviews, goals were assigned to 39 truck drivers. The results were analyzed using a time series design that included a comparison group (N=35). The results showed a significant increase in productivity for the drivers who received specific goals. When the conditions necessary for the union's toleration of the goal setting program were no longer met, there was a wildcat strike.

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IMPROVING PRODUCTIVITY THROUGH GOAL SETTING WITH UNION WORKERS

One of the most replicable findings in the motivational literature is that the setting of specific hard goals leads to increases in productivity over that which occurs when no goals are set (Locke, Shaw, Saari, & Latham, in press). Nevertheless, this finding has not been replicated extensively with union workers.

One study that did focus on goal setting with unionized employees was conducted by Latham and Baldes (1975). Unionized drivers in the southeastern United States were not loading their trucks to maximum capacity. Instead, the trucks were being loaded to approximately 60% of what was possible. Attaching scales to the trucks was not feasible from a cost/benefit standpoint because the trucks were driven over rough terrain constantly. This resulted in the scales being broken.

Exhorting the drivers for three consecutive months to try harder than they had in the past to increase the amount being hauled without exceeding the truck's legal weight restrictions resulted in no increase in productivity. As a last resort, the union was approached by the company with a goal setting program.

The above productivity problem was explained to the union. The company emphasized that no one would be rewarded for attaining the goal; similarly, it was stressed that no one would be punished for failing to attain the goal. With this understanding, a specific goal of 90% truck weight was agreed upon by the company and the union as reasonable to assign to the drivers. Productivity improved the first week that the goal was given to each driver. The increase in productivity has been maintained to the present day.

The purpose of the present study was two-fold. First, we wanted to replicate the above findings with employees in a different union in a different area of the country using a different dependent variable, namely, trips/truck rather than truck weight. A more stringent experimental design than the time series used by Latham and Baldes (1975) was employed by using a comparison group. Second, and more importantly, we wanted to collect information through interviews with the union that could serve as guidelines for gaining acceptance of goal setting programs in other unionized settings in the future.

METHOD

Subjects

The participants in this study were 74 unionized logging truck drivers. Thirty-nine drivers participated in the experimental group; 35 drivers formed the comparison group. All the truck drivers were male. Each had worked for the company four or more years.

Procedure

Prior to conducting this study, the drivers were not at the logging sites when needed. The logs were stacked at the landing, ready to be transported, with no room to place additional logs. This held-up the work flow. Supervision of the truck drivers was relatively lax because only one truck foreman was in charge of each group of 35-40 drivers. The foremen are located at a central location and are usually able to communicate with the truck drivers by radio. However, since the truck drivers spend much of their time on the road and are not always accessible by radio, they cannot be directly supervised.

The drivers' explanations for their inefficiencies ranged from mild apathy to acknowledging outright violations of company rules. For example, it was not uncommon for drivers to admit to the researchers that they frequently pulled off the road to talk to one another or to take an extended lunch hour. Since all the drivers had received intensive driver's training and orientation to company policy, additional training was not believed to be necessary for increasing their productivity. Economic conditions made it impossible to consider the benefits, if any, of increasing the number of supervisors. Therefore, it was decided that a motivation program for the truck drivers had to be developed.

The implementation of the program was straightforward. First, the necessity for improving productivity was discussed with the union. Previous benefits of goal setting were explained to them. Specifically, the studies by Latham and Kinne (1974) and Latham and Locke (1975; 1979) were discussed. Finally, the union was interviewed on factors that had to exist for their support of entering into goal setting without formal negotiations. These factors are discussed in a subsequent section of this paper (see Results).

Each Friday the truck foreman had always identified the logging sites that would be in operation the following week, and the number of drivers that would be needed. With the implementation of the goal setting program, the foreman of the 39 truck drivers in the experimental condition introduced a weekly goal for each driver in terms of average number of trips/day from the logging sites to the mill. The goal took into account factors such as: (1) distance of the logging sites from the mill, (2) road conditions, (3) size of timber being logged, and (4) skill of the driver. The weekly goals ranged from an average of 3 to 7 trips/day.

When explaining the program to the truck drivers, the truck foreman stated that the goals were not "production standards", nor would any negative consequences occur if they were not met; rather, the goals were merely something for the drivers to strive for if they so desired. The importance of goal setting for injecting challenge into a task was stressed. The company also stressed that the union had been informed of the program.

Subsequent to informing the drivers of the goal setting program, the weekly goal for each truck driver was written next to each driver's name, and posted on a bulletin board in the room where they met each morning and evening with the truck foreman. An average weekly goal for the truck drivers as a group was also calculated and placed at the top of this sheet.

Each evening the foreman posted the information he received from the mill regarding the number of trips made by each truck driver. This information had always been collected by the foreman, but in the past it had been used only for his own record keeping purposes. This information had also always been available to an individual driver regarding his own performance; for every load of logs taken in, each driver had received a ticket receipt which he was free to keep for his own records.

Trips/truck data were obtained by the authors for 5 weeks prior to the implementation of the goal setting program and 18 weeks after its implementation. In addition, data on trips/truck were obtained for the same time period on 35 drivers from another logging area for comparison purposes. This area was located in the same region as that where the goal setting program took place, it had a similar terrain and log mix, it had the same number of logging sites and approximately the same number of truck drivers, and it had similar production figures on

trips/truck averages during the five-week premeasure period as did the area where the goal setting program was implemented.

RESULTS

Union Interviews

Interviews with the union business agents identified the following five conditions necessary for them to accept the program without the requirement of formal negotiations.

First, working to attain a goal must be voluntary for an employee.

Second, there must be no monetary rewards for or special treatment of those people who attain the goal. The union contract prohibits the use of monetary incentives for individual efforts.

Third, supportive supervisory behavior in terms of setting a goal for an employee that is difficult but attainable is encouraged providing that it is clear to the employee that working to attain the goal is voluntary on his or her part. Giving verbal praise for goal attainment is acceptable supervisory behavior and does not constitute "special treatment" of employees. This is designated as supportive behavior that the union would like to see all supervisors engage in whenever an employee does good work.

Fourth, there must be no punishment for failing to attain a goal.

Finally, and most importantly, there must be sufficient long term work that goal attainment will not lead to layoffs or a reduction in the work force through attrition (i.e., a policy not to replace an employee who leaves the company).

Performance Measures

There was no significant difference between the experimental ($\bar{X} = 3.55$, $SD = .14$) and comparison ($\bar{X} = 3.49$, $SD = .16$) groups during the premeasure period. However, there was a significant difference between the two groups following the implementation of the goal setting, with the goal setting group having significantly higher weekly average number of trips/truck than the comparison group ($\bar{X} = 4.08$, $SD = .23$, $\bar{X} = 3.34$, $SD = .55$, experimental and comparison groups, respectively, $t = 5.13$, $df = 34$, $p = .01$).

The average increase for the experimental group was .53 trips/truck. Computed on a daily basis for the 39 drivers over the 18 week goal setting period, the increase in number of truck trips was approximately 1,800. Company representatives indicated that the value of the timber from one truck trip is approximately \$1,500. Thus, the value of the increase in trips/truck of the goal setting group could be estimated at as much as 2.7 million dollars.

DISCUSSION

A potential flaw in this study is that it does not incorporate a true experimental design because the drivers were not randomly assigned to conditions, thus alternative explanations (e.g., workload requirements, technological differences, worker experience, work site differences) could account for the differences obtained between the experimental and comparison groups following the

implementation of goal setting. However, the evidence appears to indicate that it was goal setting that increased productivity.

One source of evidence is the similarity of the two geographical areas compared in this study. As previously stated, these two areas were extremely similar on a number of variables including the premeasures of productivity. In fact, the two superintendents of these areas are compared quarterly on measures of productivity by upper management because of the similarities between the company's two logging districts. Furthermore, the experimental group area achieved the highest weekly average number of trips/truck ever obtained during the goal setting program.

It was also observed that following the goal setting implementation, the truck drivers started doing several things differently which impacted their productivity. For example, the foreman reported that the drivers started to use their radios to coordinate their efforts so that there would always be a truck at the logging sites when timber was ready to be loaded. This finding that goal setting can lead to strategy development or action plans has been noted by Locke et al. (in press).

Another observation was that the truck drivers were extremely aware of their goals. They were overheard repeatedly bragging about goal attainment as they came in for the evening. Several drivers who met their goals for the week purchased gold stars on their own and placed them beside their respective names. And, during a two-day holiday week that the truck foreman decided was too short to set goals, several drivers came into his office and demanded that goals be set.

The rival hypothesis that differences in productivity between the two groups was due to employee experience or equipment was rejected because the experience

of the drivers and the age and type of equipment was approximately the same for the two groups.

Support for the validity of the interview data collected from the union can be inferred from the following incident. The present study lasted 18 weeks. On the 19th week the company hired a consulting firm specializing in time study to implement a formal goal setting program for all woods operations. At this point production measures were no longer recorded in terms of trips/truck but rather were a "percent expected miles" computation. The immediate consequence of the program was a wildcat strike. The union and the company got the employees back to work by agreeing to the five points elaborated upon earlier in this article for the truck drivers. The events leading to the agreement of these points is discussed below. The following information was obtained from interviews with union and company representatives conducted after the resolution of the wildcat strike.

When the consulting firm began its work, the union employees were not told that the goals recommended by the consultants would be voluntary. The employees observed the consultants on the job site with stop watches. Rumor led them to believe that they would be required by the company to reach specific goals.

The employees believed that attainment of a goal would be tied to rewards and punishers. Many said that they thought they would be "brow beaten" for not attaining a goal. They also concluded that their jobs would be at stake if they did not attain the goals.

In order to make it clear to the union that the company would abide by the five points discussed earlier, the timberlands manager went to the union hall and explained that the goals set would be voluntary, as they had been in the

past for the truck drivers. More importantly, he stressed that supervisors would be supportive of effective performance and goal attainment, but no negative comments or consequences would occur if goals were not met. He also emphasized that there would be no cutbacks or layoffs as a result of productivity increases.

After clarifying these issues, the manager asked the union members to give the program a two month trial period after which they could reject the program if they were not satisfied with the way it was being run. The union agreed to these conditions.

Following this meeting, the manager met with all logging foremen. He emphasized the importance of adhering to the above points, and he stressed that their behavior toward the employees was critical to this program's success. The program has now been in operation for over a year with no subsequent negative incidents or complaints.

REFERENCES

- Latham, G. P., & Baldes, J. J. The "practical significance" of Locke's theory of goal setting. Journal of Applied Psychology, 1975, 60, 122-124.
- Latham, G. P., & Kinne, S. B. Improving job performance through training in goal setting. Journal of Applied Psychology, 1975, 59, 187-191.
- Latham, G. P., & Locke, E. A. Increasing productivity with decreasing time limits: A field replication of Parkinson's law. Journal of Applied Psychology, 1975, 60, 524-526.
- Latham, G. P., & Locke, E. A. Goal setting: A motivational technique that works. Organizational Dynamics, 1979, Autumn, 68-80.
- Locke, E. A., Shaw, K. N., Saari, L. M., & Latham, G. P. Goal setting and task performance: 1969-1980. Psychological Bulletin, in press.